

## **ATTACHMENT B**

### **SUBSTITUTE SPECIFICATION**

(Showing All Changes Made to the Published Specification in International Application  
No. PCT/SE2005/000126)

### **A CUBICAL BEVERAGE PACKAGING UNIT THAT INCLUDES A POURING ORIFICE OPENING**

#### **BACKGROUND OF THE INVENTION**

##### **FIELD OF THE INVENTION**

The present invention relates to a beverage packaging unit.

#### **DESCRIPTION OF THE RELATED ART**

In present day society people drink a large number of different sorts of beverage beverages, for instance aerated or carbonated beverages, juices, milk, milk-based beverages, and also packaged beer, ale, and wine, for instance in portion-wise packaging units.

The most common packaging units for present day beverages are bottles of varying sizes each with its characteristic appearance, i.e., a cylindrical package ~~which~~ that narrows at its top to form an ~~orifice~~ opening from which the beverage can be drunk or poured, ~~wherewith the orifice~~. The opening can be re-sealed with the aid of a screw-threaded cork or a screw cap. The bottles are normally made of plastic, such as PET, or glass.

Another type of common packaging unit is an ~~aluminium~~ aluminum can of cylindrical shape, so as to enable such cans to be mutually stacked, and ~~comprising~~ including a characteristic can opening procedure in which part of the ~~aluminium~~ aluminum end in the form of a tab is broken away from the upper side end of the can

~~and therewith create a hole~~ to provide an opening from which the contents of the package can be drunk or poured.

Another common type of packaging unit is ~~the~~ a Tetra Pak Pak<sup>®</sup> unit with which a plastic wrapped drinking straw is glued to one of the two largest side surfaces of the Tetra Pak Pak<sup>®</sup> unit. The contents of ~~this~~ that packaging unit are typically drunk by removing the straw from the unit and then removing the plastic wrapping and inserting the straw down through ~~a hole~~ an opening provided in the upper side of the Tetra Pak Pak<sup>®</sup> packaging unit and that is covered with ~~aluminium~~ aluminum foil. The contents of the Tetra Pak Pak<sup>®</sup> unit can then be drunk through the straw.

Another common beverage packaging unit is a glass bottle that includes a cap fitted over the neck orifice of the bottle, and ~~a hole~~ an opening from which the bottle contents can be drunk or poured.

All types of packaging units have certain positive and negative aspects. Generally speaking, some packaging units are not transport effective because they cannot be packed tightly together, while others cannot be re-sealed, and because some other packaging units are unhygienic. The drawbacks are described in more detail hereinafter.

One problem with respect to some packaging units is that they are transported over long distances, most often in large freight vehicles. The shape of cylindrical beverage packaging units prevents optimal use of the freight volume of the vehicle. The typical PET bottles are usually placed in crates, which are then stacked firmly one upon the other. ~~This~~ That means that large volumes around the bottles and above and beneath respective bottles ~~goes~~ go unused. ~~This~~ That problem thus also exists with

all cylindrical packaging units that have a tapering upper part, where either a screw cork [,] or a screw cap is affixed. Another packaging unit that constitutes a part of this problem is the typical ~~aluminium~~ aluminum can. ~~This can~~ , which is also cylindrical and ~~therewith~~ therefore also results in unused freight volume around the cans.

Another problem with many beverage packaging units is that they can not be re-sealed. When such a packaging unit has been opened on a given occasion [,] in order to drink its contents, it is normally either necessary for the person concerned to empty the unit of its contents at one and the same time or to throw away beverage that he/she does not wish to drink at that particular time subsequent to having opened the unit.

The person drinking from ~~the~~ a packaging unit will normally wish to drink a small amount, often at different times, and be able to re-seal the unit so that its ~~content~~ remaining contents can be drunk later on. One solution to this that problem exists in ~~the~~ is a bottle that is sealed with a screw-on cork, for instance ~~the~~ a PET-bottle, although ~~these~~ those bottles have less effective freight-volume properties, as mentioned above. Other typical beverage packaging units, such as ~~aluminium~~ aluminum cans, glass bottles provided with caps, or Tetra Pak Pak® packaging units, cannot be re-sealed.

One further drawback and problem encountered with the Tetra Pak Pak® packaging unit that includes a drinking straw is that the Tetra Pak Pak® unit is deformable , ~~meaning that~~ . Consequently, when the unit has been opened with the aid of the straw, and while gripping the Tetra Pak Pak® unit with unaccustomed fingers

[[,]] the unit is squeezed together to such an extent that liquid will gush from the Tetra Pak Pak® unit like a fountain and therewith land outside the unit.

All of the ~~aforesaid~~ above-described problems associated with known beverage packaging technology are solved by means of the present invention, which provides a stackable and re-sealable and hygienic beverage packaging unit.

### SUMMARY OF THE INVENTION

Accordingly ~~In accordance with the present invention~~ there is provided in ~~accordance with the invention~~ a beverage packaging unit that includes an opening from which the liquid contents of the unit can be drunk or poured ~~, wherewith said~~ . ~~The~~ opening can be closed and sealed with the aid of a closure element ~~, wherein the invention is characterized in that the~~ . The packaging unit is ~~parallelepipedic~~ parallelepipedal and ~~comprises~~ includes a hollow, box-like body and ~~said the~~ closure element ; ~~in that said parallelepipedic~~ . The parallelepipedal hollow, box-like body has a bevelled corner at which there is formed a three-sided or triangular surface that connects with ~~said the~~ box-like body ; ~~in that there projects out from said surface a~~ . A tubular part that includes ~~said the~~ opening ; ~~in that said~~ extends from the triangular surface. The closure element includes a generally pyramidal body ~~which that~~ is shaped so that when it is in abutment with ~~said the~~ bevelled corner of ~~said the~~ box-like body it forms, together with ~~said the~~ body, ~~said parallelepipedic~~ the parallelepipedal packaging unit ; ~~in that said~~ . The closure element includes a cavity for receiving ~~said the~~ tubular part [[;]] , and ~~in that~~ the packaging unit includes co-acting fasteners on ~~said the~~ tubular part and also in ~~said the~~ cavity for pivotally retaining ~~said the~~ closure

element at ~~said~~ the tubular part, so that ~~said~~ the box-like body and ~~said~~ the closure element will form a parallelepiped in given pivoted positions of the closure element ; ~~in that said~~ . The cavity extends through the closure element out to an opening on one of the outer sides of ~~said~~ the closure element ; ~~and in that the~~ . The packaging unit is open when the closure element has been pivoted or turned to a position in which ~~said~~ the packaging unit opening and the ~~orifice~~ opening in the closure element are ~~centrally~~ opposite one another.

#### BRIEF DESCRIPTION OF THE DRAWINGS

The invention will now be described in more detail below, partly with reference to exemplifying embodiments illustrated in the accompanying drawings [[,]] in which:

Figure 1 is a ~~diagrammatic illustration of the~~ perspective view of an embodiment of a packaging unit in accordance with the present invention, with the a closure element [[,]] including the an opening, and in abutment with the a box-like body;

Figure 2 is a ~~cross-sectional~~ side view of the packaging unit shown in Figure 1;

Figure 3 ~~illustrates the~~ is a plan view of a bevelled corner of the box-like body, including the an outwardly ~~protruding~~ extending tubular part ~~and its~~ having an opening;

Figure 4 ~~illustrates~~ is a top view of the closure element and its ~~orifice~~ opening;  
and

Figure 5 ~~illustrates a beverage packaging unit~~ is a top view of the closure element in a closed and an open state condition respectively.

#### DESCRIPTION OF THE PREFERRED EMBODIMENTS

Figure 1 shows an embodiment of a beverage packaging unit 1 which ~~that~~ includes an opening 5 from which ~~the~~ a beverage can be drunk or poured, which opening 5 is resealable by means of a closure element 3.

~~According to~~ In accordance with the invention, and as shown in Figure 2, the packaging unit 1 is ~~parallelepipedic~~ of parallelepipedal form and ~~comprises~~ includes a hollow, box-like body 2 and the closure element 3. One of the corners of the ~~parallelepipedic~~ parallelepipedal hollow body 2 is bevelled to provide a three-sided, or triangular, surface 9. ~~This three-sided~~ The triangular surface 9 ~~connects with~~ is part of the box-like body 2. An outwardly ~~projecting~~ extending tubular part 4, which includes an opening 5 and ~~top~~ an outer end surface 12, is located on the ~~three-sided~~ triangular surface 9.

The closure element 3 includes a generally pyramidal body that is configured so that when the closure element 3 is in abutment with the ~~three-sided~~ triangular surface 9 at the bevelled corner of the box-like body 2, ~~said the~~ the pyramidal body ~~will form said~~ together with the box-like body 2 forms the assembled ~~parallelepipedic~~ parallelepipedal packaging unit 1 ~~together with the box-like body 2~~. The closure element 3 includes a cavity 6 ~~which is intended to receive~~ that receives the tubular part 4. Mutually co-acting ~~fasteners~~ fastening means 11, for instance snap fasteners or screw threads, are provided ~~on~~ on the tubular part 4 and in the cavity 6. ~~These~~ The co-acting ~~fasteners~~ fastening means 11 serve to retain the ~~pivotal~~ rotatably-carried closure element 3 on the tubular part 4, so that the box-like body 2 and the closure element 3 ~~will form said parallelepipedic~~ the parallelepipedal packaging unit 1 in given pivoted positions of the closure element 3. The cavity 6 extends through the

closure element 3 out to an orifice opening 7 on one of the outer sides 13 of said ~~the~~ closure element (see Figure 1). The packaging unit 1 is open for beverage dispensing when the closure element 3 has been pivoted or ~~turned~~ rotated to a position in at which said ~~the~~ opening 5 of the tubular part 4 and the orifice opening 7 of the closure element 3 are ~~centrally~~ opposite one another.

Respective top and bottom ~~sides~~ surfaces of the packaging unit 1 ~~or~~ and the sides of said ~~the~~ unit 1 are ~~defined~~ shown in figure Figures 1 and 2. The box-like body 2 is shown standing resting on its bottom side surface in figure Figures 1 and 2. The side surface opposite to the bottom side surface is referred to as the top side surface of the unit 1. The bevelled corner of the box-like body 2 is located at one of the upper corners of the body.

The closure element 3 is ~~therewith~~ placed at ~~one of the corners~~ the bevelled corner of said ~~the~~ body 2 that is in contact with the top side surface of said ~~the~~ body. The orifice opening 7 of the closure element 3 is ~~placed~~ shown in Figures 1 and 2 on the surface of closure element 3 that lies in the plane defined by the top side surface of said ~~element 3~~ box-like body 2.

In one embodiment of the invention, the ~~fastener~~ fastening means 11 is a snap fastener. The snap fastener connection is preferably ~~comprised~~ in the form of an edge 8 located externally on the outer end of tubular part 4 and which engages with a recess 10 ~~placed~~ positioned within the cavity 6 of the closure element 3. The fastener fastening means 11 is adapted so that the closure element 3 can be pivoted, or ~~turned~~ about rotated, relative to the tubular part 4.

Figure 2 is a ~~cross-sectional~~ side view of the packaging unit 1. In one embodiment of the invention, the closure element 3 is ~~designed for~~ in sealing abutment with the opening 5 of the tubular part 4, and also with the top surface 12 of the tubular part 4. In another embodiment of the invention, the closure element 3 is ~~designed for~~ in sealing abutment with the ~~three-sided~~ triangular surface 9 of the box-like body 2. In a further embodiment of the present invention, the closure element 3 is ~~designed for~~ in sealing abutment with the opening 5 of the tubular part 4 and the top surface 12 of the tubular part 4, and also with the ~~three-sided~~ triangular surface 9 of the box-like body 2.

The packaging unit 1 is in a closed and sealed state when the opening 5 of the box-like body 2 and the ~~orifice~~ opening 7 of the closure element 3 are not registered ~~centrally~~ opposite one another; see ~~figure~~ Figures 3, 4, and 5. ~~This~~ The non-registered state condition is shown on the left side of Figure 5 and is achieved by pivoting or ~~turning~~ rotating the closure element 3 relative to tubular part 4, enabled by the fastener fastening means 11 of ~~said~~ the packaging unit, to a position in which the ~~orifice~~ opening 7 of the closure element 3 is positioned ~~centrally over~~ to overlie the top surface 12 of the tubular part 4 ~~, instead of positioning~~ . In the registered condition, as shown on the right side of Figure 5, the orifice opening 7 of the closure element 3 centrally over is opposite to and overlies the opening 5 of the tubular part 4 ~~; see above.~~

Preferably, when the packaging unit 1 is in an open state or registered condition, the ~~orifice~~ opening 7 of the closure element 3 ~~will be~~ is positioned on the upper uppermost side of ~~said packaging unit~~ closure element 3. The beverage



contained in the packaging unit 1 is ~~therewith~~ thereby retained until a person wishes to drink from the unit and ~~therewith turns~~ tilts the unit ~~1 so as~~ to enable beverage to ~~run~~ flow from the packaging unit through opening 7 of the closure element. ~~This construction~~ That arrangement enables the packaging unit 1 to be filled to its full capacity. If the ~~orifice~~ opening 7 is placed on one of the outer sides 13 of the closure element 3 that do not form an upper side of the unit 1, ~~the~~ and if beverage ~~will be able to run out~~ were allowed to flow from the packaging unit 1. ~~The~~ the packaging unit 1 ~~cannot~~ could not then be filled to its full capacity.

~~Plastic~~ As shown in Figure 2, plastic connecting bridges 14 are preferably fastened between the box-like body 2 and closure element 3 when the closure element is in abutment with ~~said~~ the body 2, regardless of the embodiment concerned. When ~~turning~~ rotating the closure element 3 relative to the box-like body 2 ~~and therewith to~~ open the unit 1, ~~theses~~ the bridges 14 will be broken, ~~therewith~~ thereby indicating that the unit has been opened.

Although a number of embodiments have been described above, it will be understood that the outwardly projecting tubular part 4 of the box-like body 2, the opening 5, the cavity 6 of the closure element 3, and the ~~orifice~~ opening 7 ~~may~~ can be designed in some other appropriate manner without departing from the basic concept of the invention.

The present invention ~~shall not~~ should therefore not be considered to be limited to the described and illustrated exemplifying embodiments thereof, since variations can be made within the scope of the accompanying claims.

## Claims

What is claimed is: